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EXAMINER	
OSMAN, RAMY M	
ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/965,591	MAZZA, SAM	
	Examiner	Art Unit	
	Ramy M. Osman	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. This communication is responsive to the amendment filed on March 28, 2005 where applicant amended claims 10,16-18,24,27,30 and 62. No new claims were added. Claims 1-38 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3,7,9-12,33,35,36 and 38 rejected under 35 U.S.C. 102(b) as being anticipated by White et al. (US Patent No 4,602,365).

4. In reference to claims 1,9 and 12, White teaches a group communication protocol system, and a method comprising:

a plurality of nodes on a first local area network (LAN), the plurality of nodes logically divided into at least a first group and a second group (column 2 lines 58-67);

a first token to circulate among members of the first group to cause communications among the members of the first group to be serialized (column 2 lines 35-45 & 64-67 and column 3 lines 7-15);

a second token to circulate among members of the second group to cause communications among the members of the second group to be serialized independent of the first group (column 2 lines 35-45 & 64-67 and column 3 lines 7-15).

5. In reference to claim 2, White teaches the system of claim 1, wherein at least one member of the first group is also a member of the second group (column 3 lines 1-25 and Figure 2).

6. In reference to claims 3 and 10, White teaches the systems of claims 1 and 9, wherein ownership of the first token is needed before a node can send a message to the first group (column 1 lines 5-20 and column 3 lines 35-50).

7. In reference to claim 7, White teaches the system of claim 1 further comprising one or more nodes on a second LAN, wherein the one or more nodes on the second LAN are members of the first group (column 3 lines 1-25 and Figure 2).

8. In reference to claim 11, White teaches the system of claim 9, wherein the communication among members of the first group comprises unicast messages (column 1 lines 7-67).

9. In reference to claims 33 and 36, White teaches a group communication system and a method comprising:

a plurality of nodes on a local area network (LAN) logically divided into a first group and a second group (column 2 lines 58-67);

a first token means, circulating among members of the first group, for serializing multicast communications among the members of the first group (column 2 lines 35-45 & 64-67 and column 3 lines 7-15); and

a second token means, circulating among members of a second group, for serializing multicast communications among the members of the second group independent of the first group (column 2 lines 35-45 & 64-67 and column 3 lines 7-15).

10. In reference to claims 35 and 38, White teaches the system and method of claims 34 and 36, wherein ownership of the first token means is needed before a node can send a message to the first group (column 1 lines 5-20 and column 3 lines 35-50).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. **Claims 4 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (US Patent No 4,602,365) in view of Ferguson et al (US Patent No 5,802,056).**

13. In reference to claim 4, White teaches the systems of claim 1. White fails to explicitly teach wherein the communication among the members of the first group comprises multicast messages. However, Ferguson teaches virtual rings in a local area network. Ferguson discloses multicasting in the ring network (column 1 lines 25-40, column 3 lines 45-60 and column 4 line 63 – column 7 line 16).

It would have been obvious for one of ordinary skill in the art to modify White by making the communication among the members of the first group comprise multicast messages

as per the teachings of Ferguson for the purpose of sending information to multiple destinations simultaneously.

14. In reference to claim 5, White teaches the system of claim 1. White fails to explicitly teach wherein the communication among the members of the second group comprises broadcast message. However, Ferguson teaches virtual rings in a local area network. Ferguson discloses broadcasting in the ring network (column 1 lines 25-40, column 3 lines 45-60 and column 4 line 63 – column 7 line 16).

It would have been obvious for one of ordinary skill in the art to modify White by making the communication among the members of the first group comprise broadcast messages as per the teachings of Ferguson for the purpose of sending information to multiple destinations simultaneously.

15. **Claims 6,15-18,27,28 and 34 rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (US Patent No 4,602,365) in view of Sakamura et al (US Patent No 5,274,637).**

16. In reference to claims 6 and 15, White teaches the system and method of claims 1 and 12. White fails to explicitly teach wherein the first and second tokens include a sequencing mechanism. However, Sakamura teaches token ring local area networks. Sakamura discloses sequence numbers for data transmission purposes (column 6 lines 40-65 and column 19 lines 10-50).

It would have been obvious for one of ordinary skill in the art to modify White by including a sequencing mechanism as per the teachings of Sakamura for the purpose of organizing and determining successful transmissions.

17. In reference to claim 16, White teaches the method of claim 15, further comprising:

a. receiving the first token at a first member of the first group (column 1 lines 7-67);

e. passing the first token to the next member of the first group (column 1 lines 7-67).

White fails to explicitly teach: b. incrementing the sequence number: c. sending a broadcast message to the first group using the sequence number; and d. repeating b-c for each message, if any, at the head of one or more message queues of the first member that are destined for the first group or until a specified event has occurred. However, Sakamura discloses incrementing sequence numbers for data transmission purposes (column 6 lines 40-65 and column 19 lines 10-50).

It would have been obvious for one of ordinary skill in the art to modify White by including a sequencing mechanism as per the teachings of Sakamura for the purpose of organizing and determining successful transmissions.

18. In reference to claims 17,27 and 28, White teaches a method and a method of steps comprising:

receiving, at a first member of a first group on a local area network (LAN), a first token associated with the first group from another member of the first group on the LAN (White, column 2 lines 35-45 & 64-67 and column 3 lines 7-15);

incrementing a sequence number associated with the first token); sending a message to the members of the first group using the sequence number associated with the first token (Sakamura, column 6 lines 40-65 and column 19 lines 10-50);

passing the first token to a next member of the first group on the LAN (White, column 1 lines 7-67);

receiving, at a member of a second group on the LAN, a second token associated with the second group from another member of the second group on the LAN (White, column 2 lines 35-67 and column 3 lines 7-15);

incrementing a sequence number associated with the second token; sending a message to the members of the second group using the sequence number associated with the second token (Sakamura, column 6 lines 40-65 and column 19 lines 10-50); and

19. In reference to claim 18, White teaches the method of claim 17 further comprising:

replacing a field value associated with the first token with a field value associated with the first member of the first group (column 3 lines 7-60).

20. In reference to claim 34, White teaches the system of claim 33 wherein the first and second token means include a sequence number (Sakamura, column 6 lines 40-65 and column 19 lines 10-50).

21. **Claims 19 rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (US Patent No 4,602,365) in view of Sakamura et al (US Patent No 5,274,637) in further view of Ferguson et al (US Patent No 5,802,056).**

White teaches the systems of claim 1. White fails to explicitly teach wherein the communication among the members of the first group comprises multicast messages. However, Ferguson teaches virtual rings in a local area network. Ferguson discloses multicasting in the ring network (column 1 lines 25-40, column 3 lines 45-60 and column 4 line 63 – column 7 line 16).

It would have been obvious for one of ordinary skill in the art to modify White by making the communication among the members of the first group comprise multicast messages as per the teachings of Ferguson for the purpose of sending information to multiple destinations simultaneously.

22. Claims 8,13,14 and 20-23 rejected under 35 U.S.C. 103(a) as being unpatentable over White (US Patent No 4,602,365) in view of Minyard (US Patent No 6,553,508).

23. In reference to claims 8,13 and 14, White teaches the system and method of claims 1 and 12 above. White fails to explicitly teach wherein the first and second groups comprise replication groups, each including at least one primary and at least one replica. However, Minyard teaches communication fabrics with redundant fabrics (replication groups) each with communication devices, in order to enhance fault tolerance in the network (Summary and column 3 lines 1-25).

It would have been obvious for one of ordinary skill in the art to modify White by making the first and second groups comprise replication groups, each including at least one primary and at least one replica as per the teachings of Minyard in order to enhance fault tolerance in the network.

24. In reference to claim 20, White in view of Miynard teaches a replication group system comprising:

White teaches a first and second group located on a network (White, column 2 lines 35-67 and column 3 lines 7-15).

White fails to explicitly teach a first replication group located on a local area network (LAN), the first replication group including a first primary entity and a first group of one or more replica entities wherein members of the first replication group are members of a first group; a second replication group located on the LAN, the second replication group including a second primary entity and a second group of one or more replica entities wherein members of the second replication group are members of a second group. However, Minyard teaches communication fabrics with redundant fabrics (replication groups) each with primary and replicated communication groups, which makes redundant fabrics in order to enhance fault tolerance in the network (Summary, column 1 lines 7-10 and column 3 lines 1-25).

It would have been obvious for one of ordinary skill in the art to modify White by making first replication group located on a local area network (LAN), include a first primary entity and a first group of one or more replica entities wherein members of the first replication group are members of a first group; and a second replication group located on the LAN, which includes a second primary entity and a second group of one or more replica entities wherein members of the second replication group are members of a second group as per the teachings of Minyard which makes redundant fabrics in order to enhance fault tolerance in the network.

White teaches an intersection between the groups (White, column 2 lines 35-67, column 3 lines 7-25 and figure 2).

White also teaches a first token circulating among members of the first group causing communications among the members of the first group to be ordered (column 2 lines 35-45 & 64-67 and column 3 lines 7-15); and a second token circulating among members of the second group causing communications among the members of the second group to be ordered independent of the first replication group (column 2 lines 35-45 & 64-67 and column 3 lines 7-15).

25. In reference to claims 21, White teaches the system of claim 20 further comprising:

a first storage area associated with the intersection, comprising serialized messages for the first replication group (column 2 lines 35-45 & 64-67 and column 3 lines 7-15); and

a second storage area associated with the intersection, comprising serialized messages for the second replication group (column 2 lines 35-45 & 64-67 and column 3 lines 7-15).

26. In reference to claims 22 and 23, White teaches the system of claim 20. White fails to explicitly teach wherein at least one replica entity in the intersection operates as a warm or cold replica for the first primary entity and a warm or cold replica for the second primary entity; and wherein at least one replica entity in the intersection operates as a hot replica for the first primary entity and a warm or cold replica for the second primary entity. However, Minyard teaches communication fabrics with redundant fabrics (replication groups) each with communication devices, in order to enhance fault tolerance in the network (Summary and column 3 lines 1-25).

It would have been obvious for one of ordinary skill in the art to modify White by making the first and second groups comprise replication groups, each including at least one primary and at least one replica as per the teachings of Minyard in order to enhance fault tolerance in the network.

27. **Claims 24-29,30-32 and 37 rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (US Patent No 4,602,365) in view of Sakamura et al (US Patent No 5,274,637) in further view of Minyard (US Patent No 6,553,508).**

28. In reference to claims 24,30 and 31, White teaches a method, a system and a machine readable medium comprising:

receiving, at a first member of a first group on a local area network (LAN), a first token associated with the first group from another member of the first group on the LAN (White, column 2 lines 35-45 & 64-67 and column 3 lines 7-15);

receiving, at a member of a second group on the LAN, a second token associated with the second group from another member of the second group on the LAN (White, column 2 lines 35-45 & 64-67 and column 3 lines 7-15);

incrementing a sequence number associated with the first token; incrementing a sequence number associated with the second token (Sakamura, column 6 lines 40-65 and column 19 lines 10-50);

sending a message to the members of the first group using the sequence number associated with the first token; sending a message to the members of the second group using the sequence number associated with the second token (White, column 2 lines 35-67 and column 3 lines 7-15).

White fails to explicitly teach wherein the first and second groups comprise replication groups, each including at least one primary and at least one replica. However, Minyard teaches

communication fabrics with redundant fabrics (replication groups) each with communication devices, in order to enhance fault tolerance in the network (Summary and column 3 lines 1-25).

It would have been obvious for one of ordinary skill in the art to modify White by making the first and second groups comprise replication groups, each including at least one primary and at least one replica as per the teachings of Minyard in order to enhance fault tolerance in the network.

29. In reference to claim 25, White teaches the method of claim 24. White fails to explicitly teach wherein the first replication group further comprises a replica entity located on a second LAN. However, Minyard teaches communication fabrics with redundant fabrics (replication groups) each with communication devices, in order to enhance fault tolerance in the network (Summary and column 3 lines 1-25).

It would have been obvious for one of ordinary skill in the art to modify White by making the first and second groups comprise replication groups, each including at least one primary and at least one replica as per the teachings of Minyard in order to enhance fault tolerance in the network.

30. In reference to claims 26,29,32and 37, White teaches the method, the system and machine readable medium of claims 24,27,30,36. However, White fails to explicitly teach wherein the first and second tokens comprise Totem tokens. However, Minyard teaches Totem networks and tokens since Totem networks provide for multicast delivery of messages.

It would have been obvious for one of ordinary skill in the art to modify White wherein the first and second tokens comprise Totem tokens as per the teachings of Minyard since Totem networks provide for multicast delivery of messages.

Response to Arguments

31. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramy M. Osman whose telephone number is (571) 272-4008. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RMO
June 6, 2005

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